

NASA Explorer Schools News

*A monthly newsletter
from the teachers of
tomorrow's explorers*

In September, readers sent us their ideas about why NASA should explore space. This month, we want to point out some of the everyday benefits we have from the space program.

Featured Mission



FROM SPACE TO YOU

What do UPC bar codes, scratch-resistant lenses, hockey helmets and golf balls have in common? They are all called spin-offs: inventions that have been developed by NASA for the space program and are now used every day. A common feature on all your groceries, the bar code was originally invented to keep track of millions of spacecraft parts. Have you ever dropped your eyeglasses and notice how the lenses didn't get scratched? That's because of a process called dual ion beam bonding developed by NASA, by which lenses are coated with a very thin, tough film of diamond-like carbon. Do you play hockey or football or go biking? The helmets worn for those activities contain a padding of Temper Foam, which is three times more shock absorbing than previous foams. It was developed for use in NASA aircraft seats. Why would NASA design golf balls? NASA didn't invent the golf ball, but NASA science showed how to improve the design of golf balls by adding dimples to the surface that help it fly further and more accurately.

ksc.nasatechnology.com/resources/spinoffs/spinoffs.asp

NASA TV will be featuring programs on NASA spin-offs that affect everyday life during the week of November 16 – 21.

www.nasa.gov/multimedia/nasatv/index.html

Activity Corner

See more NASA spin-offs and test your memory at NASA's Space Place. Space Place is a great place to find activities, games, animations.

spaceplace.nasa.gov/en/kids/spinoffs.shtml

Exercise your brain with these brainteasers:

scifiles.larc.nasa.gov/text/kids/Problem_Board/problems/invention/matchsticks.html

Bytes and Bits

NESN Puzzler

Who is this woman, and why is she significant in aviation history?

The first ten answers will receive a NASA prize! Email us your name, teacher's name, and the name and address of your school. Answer to last month's NESN Puzzler: 74 miles per hour.

NASA will launch the Swift spacecraft in November to study Gamma-ray bursts (GRBs). GRBs are powerful explosions in space that

happen about once a day. The Swift spacecraft has three telescopes that will detect and observe GRBs in deep space while the spacecraft orbits Earth.

swift.gsfc.nasa.gov

Do you need a project for your science or math club? Why not register your club or team for the **NES Challenge – Return to the Moon!** Deadline for project applications is November 12, so act now!

learners.gsfc.nasa.gov/challenge/

NASA Explorers are people like you

Name: Ruth D. Jones

Education: Ph.D. Physics/Material Science, Alabama A&M University

Job: Optical Materials Physicist



Dr. Ruth Jones works on a research effort with the Return to Flight mission at NASA's Marshall Space Flight Center. As a teenager Ruth thought she would go into the Air Force, but a medical problem brought that dream to an end, and she headed off to college to become an accountant. After two years of accounting classes she changed majors to study physics. She went on to earn her bachelor's, master's and doctoral degrees in physics. Today, Ruth works at NASA on the design and development of a large focal length telescope lens for the Return to Flight Project. The efforts of people like Ruth will have the Space Shuttle flying again in 2005. Ruth also conducts research in an optics lab, working on the latest in fiber optics technology. Her advice to the explorers of tomorrow is "if you fail to plan then you plan to fail: when setting goals always have a backup plan."

NES Spotlight

Kenneth J Carberry Intermediate School

Students: 400

Teaching staff: 25

Carberry Intermediate is nestled in a serene rural valley 30 miles north of Boise, Idaho. The school opened in 2000 and hosts grades 4 to 6. It is named after a teacher, principal and superintendent who worked for the school district for 30 years. The staff is dedicated to promoting student success and strives to ensure the school is a safe and inviting place for students to learn. Carberry Intermediate has a science club that has 80 members. The club hosts an annual open house and once a year holds a sleep over for members and their families at the Discovery Center of the Idaho Science Museum. Carberry is extremely proud of becoming a NASA Explorer School. The school was also awarded a grant from Toyota and the National Science Teachers Association. Carberry Intermediate is certainly a school on the right track.

www.isd221.net



National Aeronautics and
Space Administration

Please send comments or questions to NESNews@nasa.gov
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